



iPad 4 GSM Battery Replacement

Replace the battery in your iPad 4 GSM.

Written By: Andrew Optimus Goldberg



INTRODUCTION

Use this guide to replace the battery.



TOOLS:

- [SIM Card Eject Tool](#) (1)
- [iOpener](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Phillips #0 Screwdriver](#) (1)
- [Spudger](#) (1)
- [Tweezers](#) (1)
- [Metal Spudger](#) (1)
- [iFixit Opening Picks set of 6](#) (1)



PARTS:

- [iPad Retina Battery](#) (1)
- [iPad Retina Adhesive Strips](#) (1)

Step 1 — iOpener Heating



-  We recommend that you clean your microwave before proceeding, as any nasty gunk on the bottom may end up stuck to the iOpener.
- Place the iOpener in the center of the microwave.
-  For carousel microwaves: Make sure the plate spins freely. If your iOpener gets stuck, it may overheat and burn.

Step 2




- Heat the iOpener for **thirty seconds**.
- Throughout the repair procedure, as the iOpener cools, reheat it in the microwave for an additional thirty seconds at a time.

- ⚠ Be careful not to overheat the iOpener during the repair. Overheating may cause the iOpener to burst.
- ⚠ Never touch the iOpener if it appears swollen.
- ⚠ If the iOpener is still too hot in the middle to touch, continue using it while waiting for it to cool down some more before reheating. A properly heated iOpener should stay warm for up to 10 minutes.

Step 3



- Remove the iOpener from the microwave, holding it by one of the two flat ends to avoid the hot center.

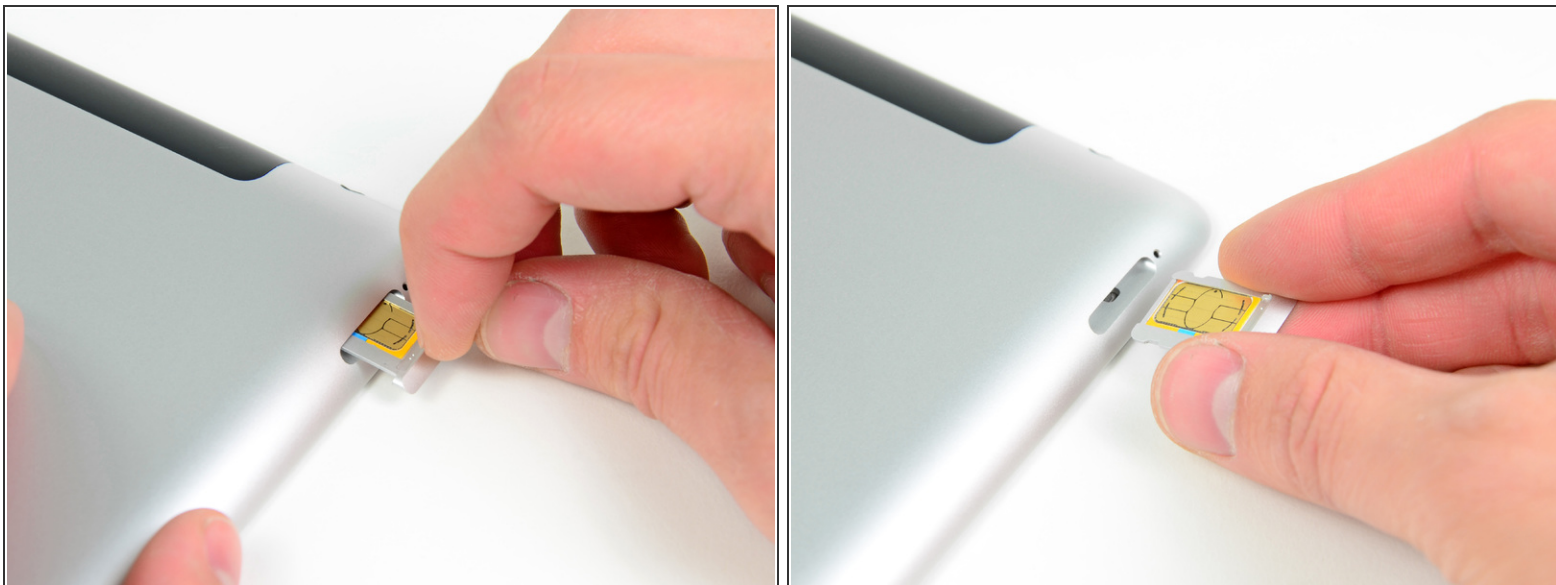
 The iOpener will be very hot, so be careful when handling it. Use an oven mitt if necessary.

Step 4 — SIM Tray



- Use a SIM eject tool or an uncoiled paperclip to eject the SIM tray.

Step 5




- Pull the SIM tray out of its slot and remove it from the iPad.
- ✦ If replacing the SIM card, pop it out of its tray and install the new one.

Step 6 — Front Panel



- If your display glass is cracked, keep further breakage contained and prevent bodily harm during your repair by taping the glass.
- Lay overlapping strips of clear packing tape over the iPad's display until the whole face is covered.
 - ⓘ This will keep glass shards contained and provide structural integrity when prying and lifting the display.
- Do your best to follow the rest of the guide as described. However, once the glass is broken, it will likely continue to crack as you work, and you may need to use a metal prying tool to scoop the glass out.

 Wear safety glasses to protect your eyes, and be careful not to damage the LCD screen.

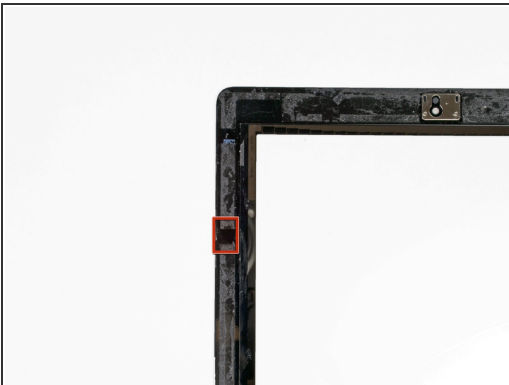
Step 7



⚠ Again, as you may find yourself working with broken glass during this procedure, we strongly recommend wearing [safety glasses](#) for protection from flying shards.

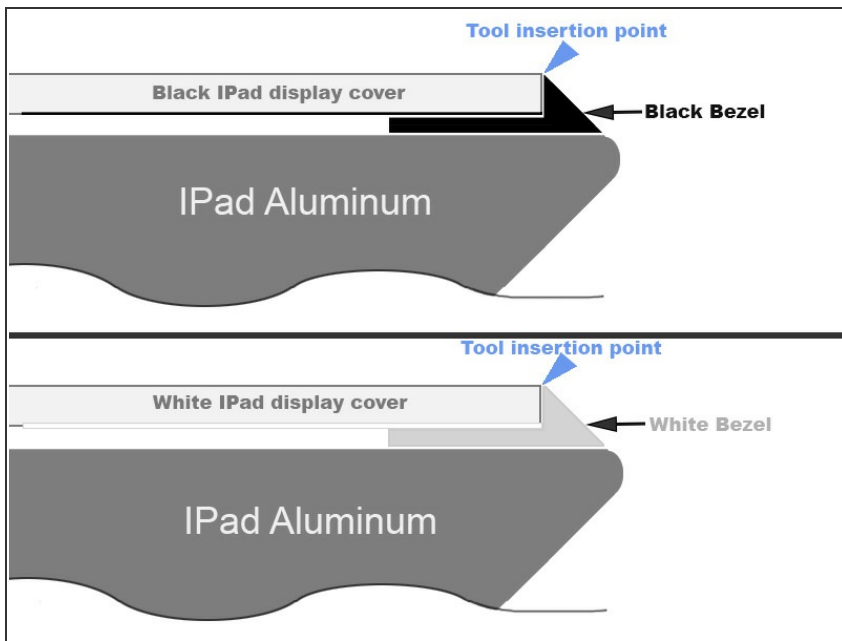
- Lay the iOpener flat on the right edge of the iPad, smoothing it out so that there is good contact between the surface of the iPad and the iOpener.
- Let the bag sit on the iPad for approximately 90 seconds before attempting to open the front panel.

Step 8



- There is a small gap in the iPad's adhesive ring in the upper right corner of the iPad, approximately 2.0 inches (~5 cm) from the top of the iPad. You are going to exploit this weakness.
- Align the tool with the mute button. Insert the tip of a plastic opening tool into the gap between the front glass and the plastic bezel. Just insert the very tip of the opening tool, just enough to widen the crack.
- ⓘ It may require some force to get the wedged tip of the opening tool between the glass and plastic. Work patiently and carefully, wiggling the plastic opening tool back and forth as necessary.

Step 9



- Make sure you place the tool in the proper spot—between the plastic display bezel and the front panel glass.

Step 10



- Keeping the tip of the plastic opening tool wedged between the front glass and plastic bezel, slide a plastic opening pick in the gap, right next to the plastic opening tool.

Step 11



- Remove the plastic opening tool from the iPad, and push the opening pick further underneath the front glass to a depth of ~0.5 inches.

Step 12





- While you work on releasing the adhesive on the right side of the iPad, reheat the iOpener, and replace it on the bottom edge of the iPad.

Step 13



- While the bottom edge is being heated by the iOpener, begin releasing the adhesive from the right edge of the iPad.
- Slide the opening pick down along the edge of the iPad, releasing the adhesive as you go.

 The adhesive is very strong, and some serious force may be required. Work carefully.

-  If you can see the tip of the opening pick underneath the front glass, pull the pick out just a little bit. While using the opening pick this deep won't damage anything, it may get adhesive residue all over the LCD.

Step 14



- i** It may be necessary to move the heated iOpener back onto the right edge of the iPad as you release the adhesive. This depends on how long the iPad has been able to cool while you were working on it.
- If the opening pick gets stuck in the adhesive, "roll" the pick along the side of the iPad, continuing to release the adhesive.

Step 15



- Before removing the first opening pick from the bottom corner of the iPad, insert a second pick under the right edge of the front glass to keep the adhesive from re-adhering.
- Re-heat the iOpener, and move it to the top edge of the iPad.

Step 16




- ✦ The next few steps require extreme caution.
- ⚠ The Wi-Fi antenna is attached to the bottom right edge of the rear case of the iPad via screws and a cable. Because of the orientation of the Wi-Fi antenna, it is imperative to proceed with caution otherwise irreversible damage to the Wi-Fi antenna may result.
- You will have to release the adhesive securing the antenna to the front panel without damaging the delicate parts attaching the antenna to the bottom of the iPad. Follow the next steps carefully.

Step 17





- Slide the opening pick around the bottom right corner of the iPad, releasing the adhesive there.

 Do not slide the pick further than the bottom right corner. You may damage the Wi-Fi antenna by doing so.

Step 18



-  This step requires you to move the opening pick along the bottom right edge of the front panel. The Wi-Fi antenna is very close to the corner and is easily severed if the adhesive is released improperly.
-  Do not completely remove the pick from under the front glass, but pull it out just a little bit so that ~1/8" of the tip is still under the front glass.
- Slide the tip of the opening pick along the bottom edge of the iPad, releasing the adhesive over the Wi-Fi antenna.

Step 19



- Once you have moved past the Wi-Fi antenna (approximately 3" from the right edge, or right next to the home button) re-insert the opening pick to its full depth.
- Slide the pick to the right, releasing the adhesive securing the Wi-Fi antenna to the front glass.
- The antenna is attached to the bottom of the iPad via screws and a cable. This step detaches the antenna from the front panel, ensuring that when you remove the panel, the antenna will not be damaged.

Step 20



- Continue releasing the adhesive along the bottom of the iPad, pulling the opening pick out far enough to go around the home button, and re-inserting it to a depth of 1/2 inch once the pick is past the home button.
- ⓘ If the adhesive has cooled too much along the bottom edge, reheat the iOpener to warm the adhesive where you are working.
- ⚠ Do not heat the iOpener more than a minute at a time, and always allow at least two minutes before reheating it.

Step 21



- Continue releasing the adhesive all the way along the bottom edge of the iPad.
 - ⚠ On iPad 4 models, insert the pick to a maximum depth of 1/2 inch in this area, to avoid damaging the home button ribbon cable.
- Leave the opening pick wedged underneath the front glass near the home button.

Step 22



- Reheat the iOpener in the microwave and set it on the left edge of the iPad to start warming the adhesive in that section.

Step 23



- Slide the opening pick along the top edge of the iPad, pulling it out slightly to go around the front-facing camera bracket.
- The adhesive along this section is very thick, and a fair amount of force may be required. Work carefully and slowly, making sure to not slip and damage yourself or your iPad.
- ⓘ If the adhesive has cooled too much, replace the iOpener along the top edge and continue working. If the iOpener has cooled too much, reheat it.
- ☑ If the opening pick is getting stuck in the adhesive, "roll" the pick as shown in [step 9](#).

Step 24



- Continue releasing the adhesive along the top edge of the iPad, and slide the opening pick around the top left corner.

i If the adhesive is warm enough, remove the iOpener from the iPad for convenience. However, if the adhesive is still quite sticky, re-heat the iOpener and lay it on the left edge while you work.

Step 25




- Slide the opening pick along the left edge of the iPad, releasing the adhesive as you go. The adhesive is thin here due to the digitizer along the whole left side. Make sure the pick is not too deep (max 1/2 inch) to prevent damaging the digitizer.

! The digitizer cable is located approximately 2" from the bottom of the iPad. Stop sliding the pick when you get ~2.25" from the bottom of the iPad.

Step 26



- Using the opening pick that is still underneath the bottom edge of the iPad, release the adhesive along the bottom left corner.

 The bottom of the digitizer cable is only ~1" from the bottom of the iPad. Work carefully and slowly, making sure to not sever this cable.

Step 27




- Using one of the opening picks, pry up the bottom right corner of the iPad and grab it with your fingers.
- ⓘ Some of the adhesive along the perimeter of the iPad may have stuck back down again. If this is the case, slide a pick underneath the edge of the iPad where the front glass is still stuck and "cut" the adhesive.

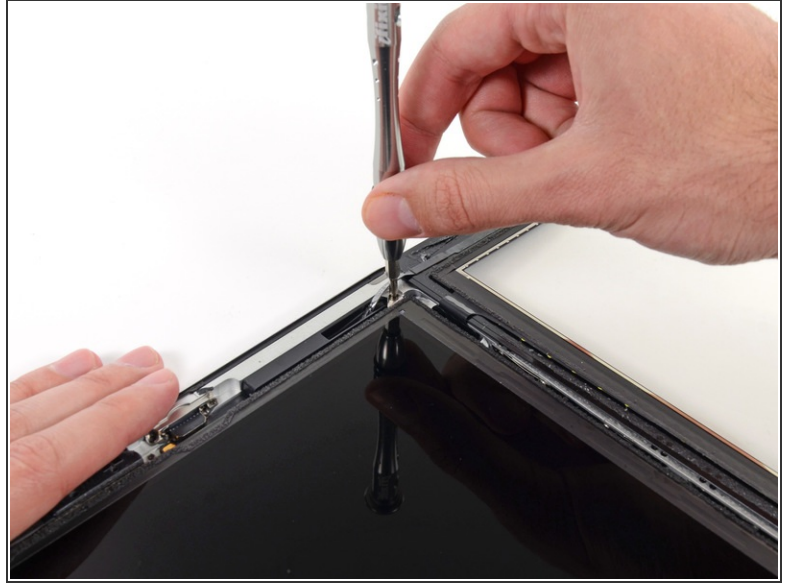
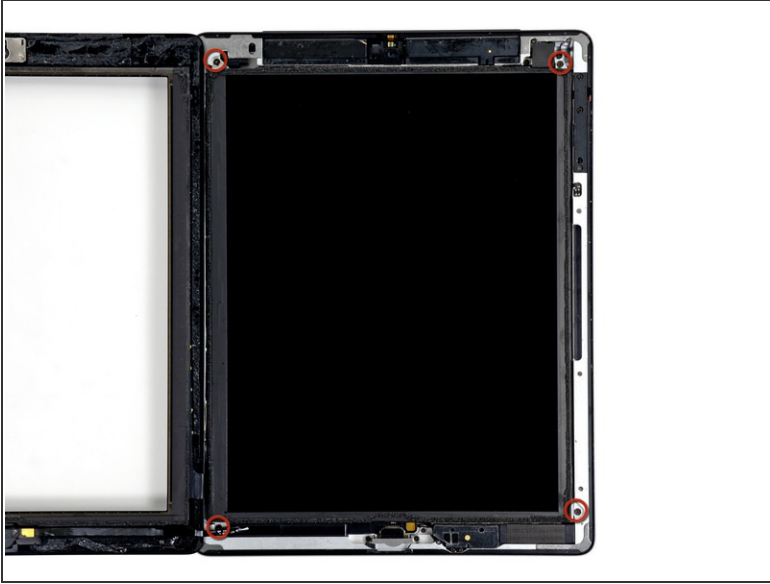
Step 28



- Holding the iPad by the top and bottom right corners, rotate the front glass away from the iPad.

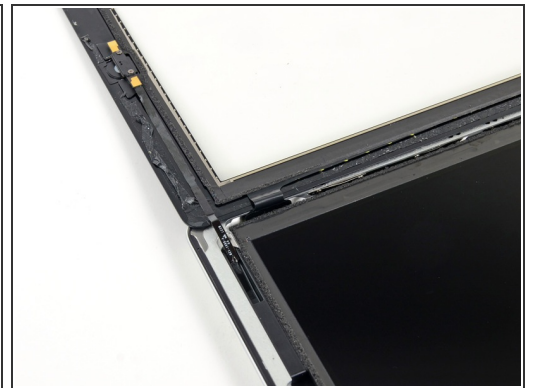
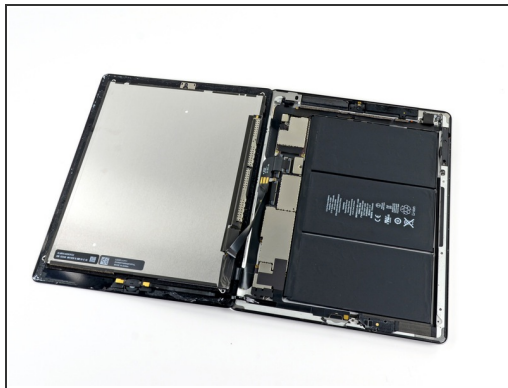
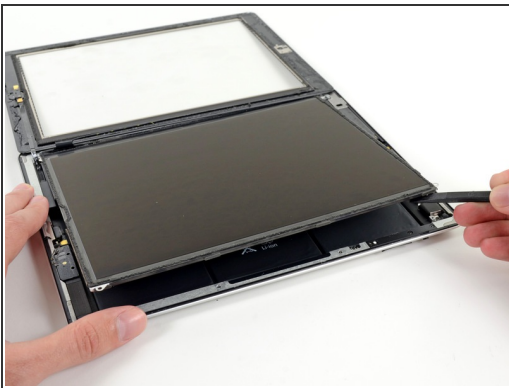
 Be careful of any adhesive that may still be attached, and use an opening pick to cut any adhesive that may still be holding the front panel down.

Step 29 — Front Panel Assembly



- Remove the four 2 mm Phillips #00 screws securing the LCD to the aluminum frame.
- ⓘ The bottom left screw is obscured by the home button ribbon cable connector. Carefully move the home button ribbon cable aside to remove the bottom left screw.

Step 30



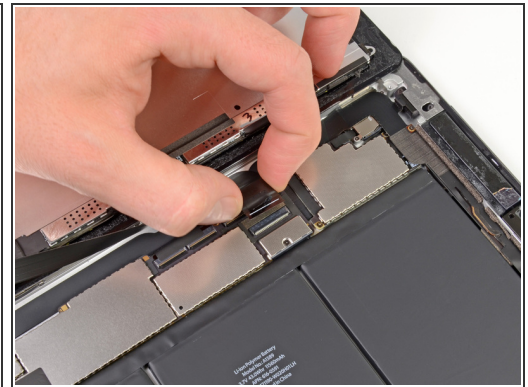
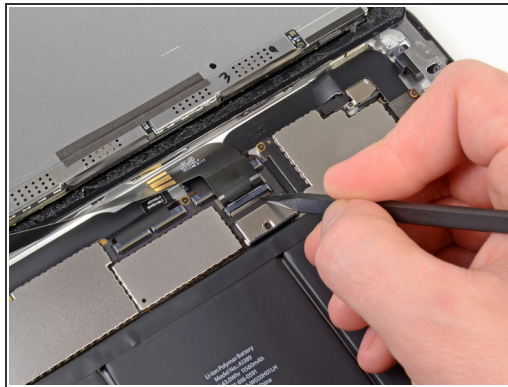
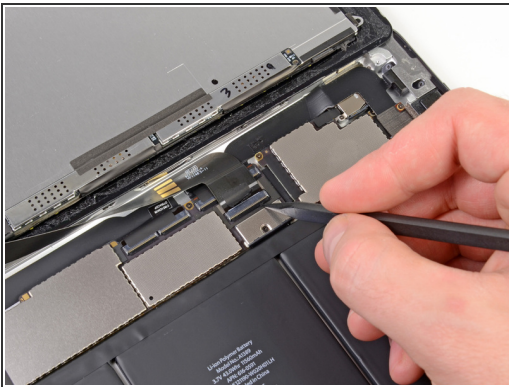
- Using a plastic opening tool or a spudger, lift the right edge of the LCD out of the iPad.
 - Rotate the LCD along its left edge and lay it down on top of the front glass panel.
- ⚠ Be careful as you move the LCD. The ribbon cable is fragile and may break if it is flexed too much.

Step 31 — LCD



- Using the tip of a spudger, peel back the piece of tape covering the LCD ribbon cable connector.

Step 32



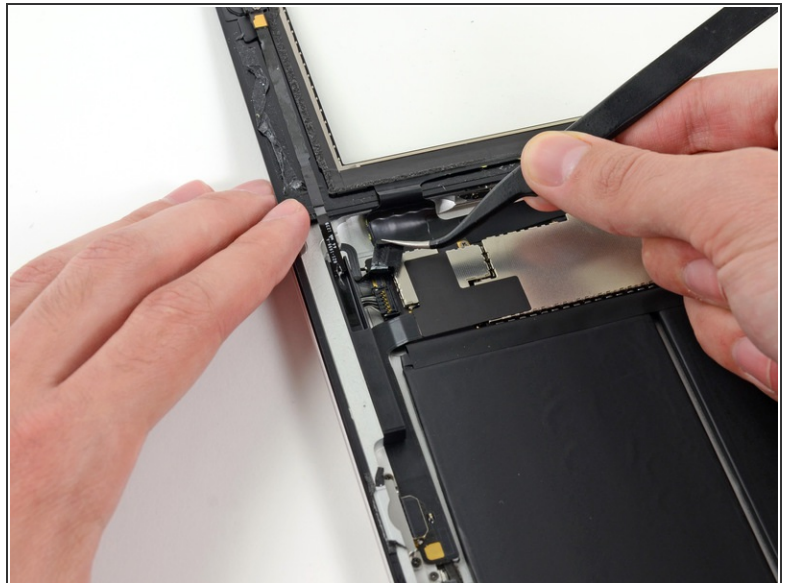
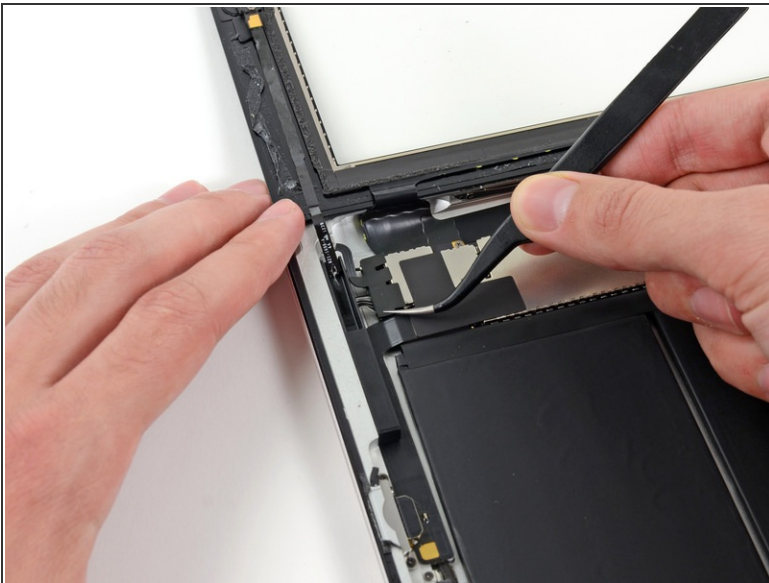
- Flip up the retaining flap on the LCD ribbon cable ZIF connector.
 - Using your fingers or a pair of tweezers, pull the LCD ribbon cable from its socket on the logic board.
- ☑ You may have to force restart the iPad by holding down the power button and home button for at least ten seconds until you see the Apple logo if the LCD screen doesn't power on after connecting the ZIF connector for the LCD screen when putting everything back together.

Step 33



- Without touching the front of the LCD, lift the LCD off the front panel.

Step 34 — Front Panel Assembly



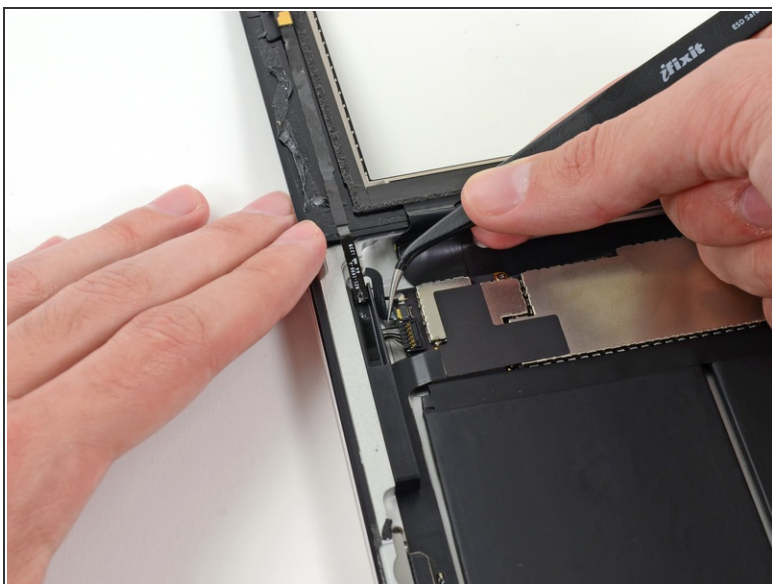
- ⓘ If present, remove the piece of electrical tape covering the Wi-Fi antenna, speaker cable, and home button ribbon cable.

Step 35



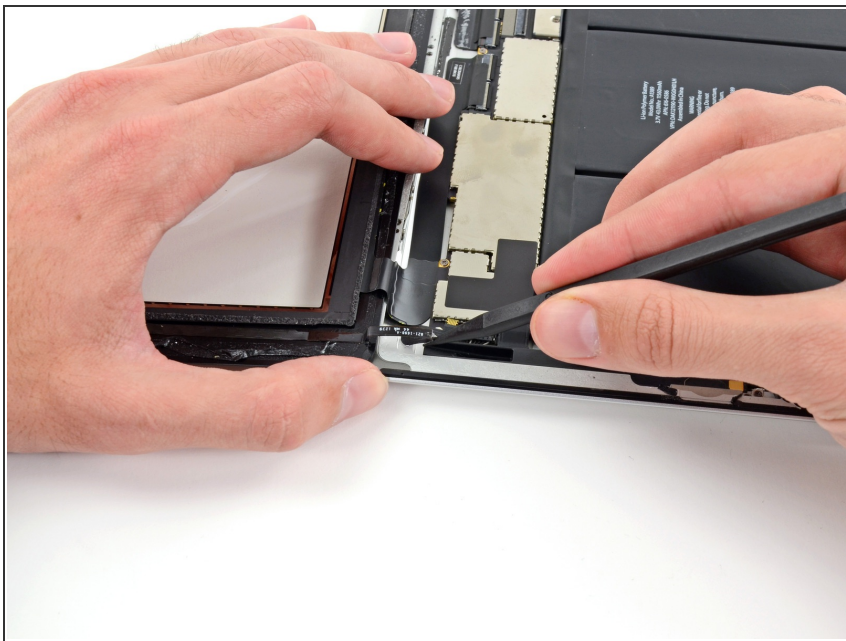
- Flip up the retaining flap on the home button ribbon cable ZIF connector.

Step 36



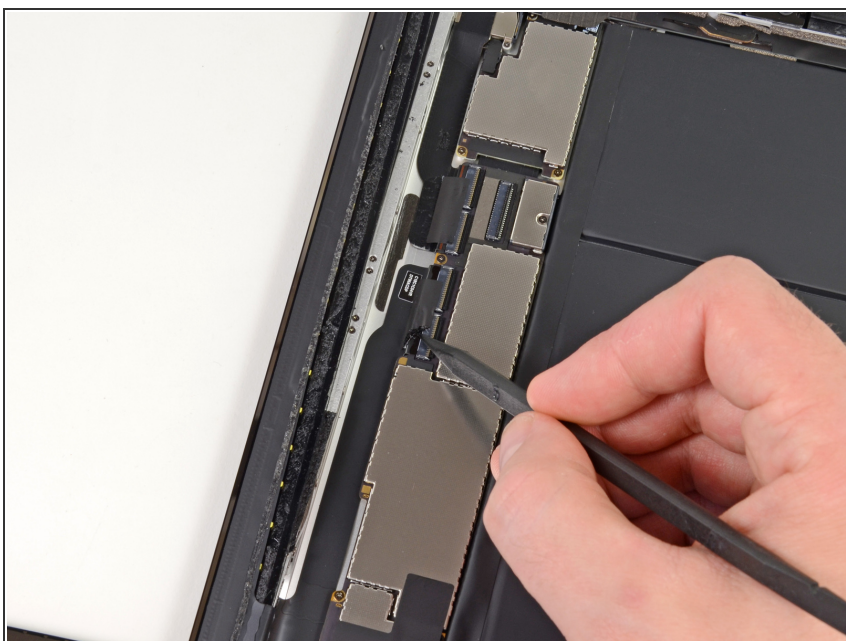
- Use a pair of tweezers to pull the home button ribbon cable straight out of its socket on the logic board.

Step 37



- De-route the home button ribbon cable from its recess in the rear case.

Step 38



- Using the tip of a spudger, peel back the piece of tape that secures the digitizer ribbon cable to the logic board.

Step 39



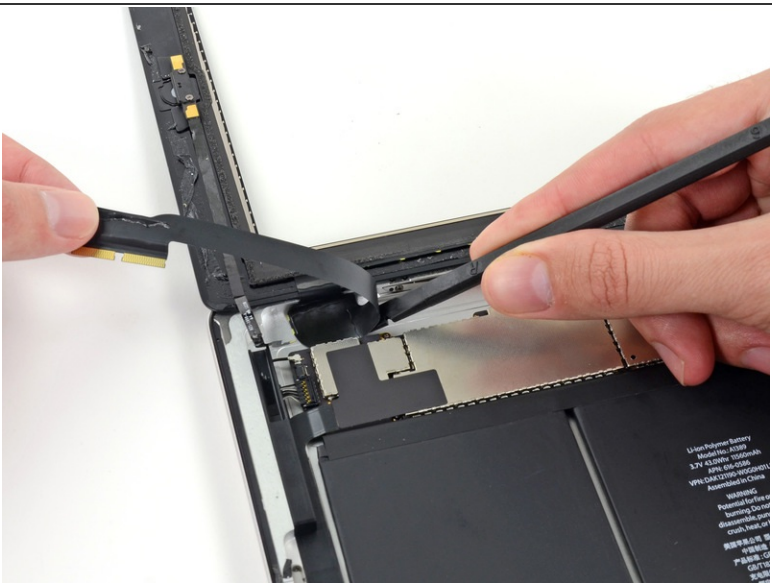
- Flip up the retaining flap on **both** of the digitizer ribbon cable ZIF connectors.

Step 40



- Use the flat end of a spudger to loosen the adhesive underneath the digitizer ribbon cable.
- Pull the digitizer ribbon cable straight out of its sockets on the logic board.

Step 41



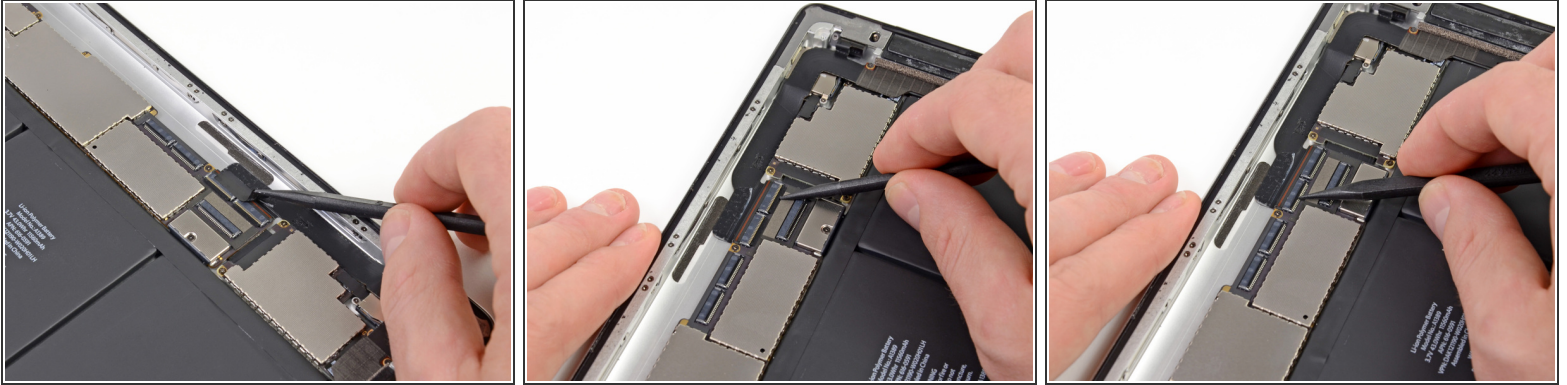
- Peel back the digitizer ribbon cable and use the flat end of a spudger to release the adhesive securing the cable to the rear aluminum case.

Step 42



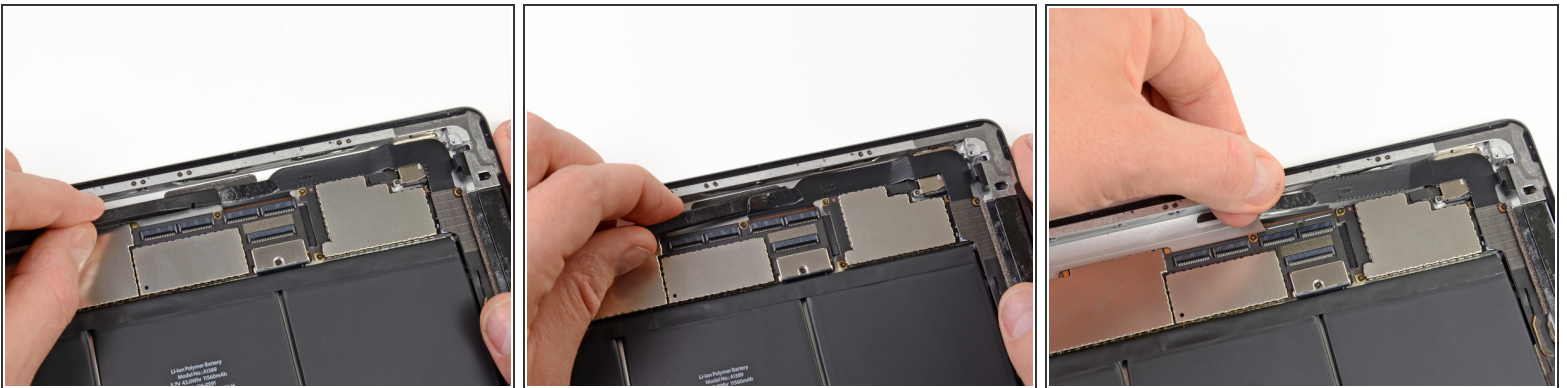
- Using your fingers, pull the digitizer ribbon cable out of its recess in the aluminum frame.
- Remove the front panel from the iPad.

Step 43 — Headphone Jack Cable



- Peel back and remove the piece of electrical tape covering the headphone jack assembly cable connector.
- Using the tip of a spudger, flip up the retaining flap on both of the ZIF connectors securing the headphone jack cable to the logic board.

Step 44



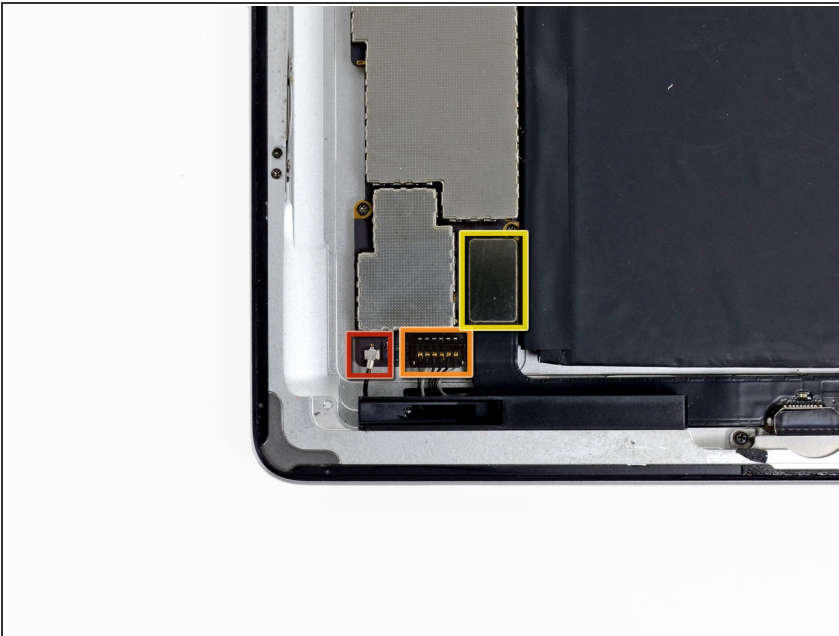
- Slide the flat end of a spudger underneath the headphone jack assembly cable, releasing the adhesive securing it to the rear aluminum frame.
- Pull the headphone jack assembly cable straight out of its socket on the logic board.

Step 45 — SIM Board Ribbon Cable



- Peel back and remove the piece of tape covering the SIM board cable ZIF connector.
- Flip up the retaining flap on the SIM board cable ZIF connector.
- Using the tip of a spudger, pull the SIM board cable straight out of its socket on the logic board.

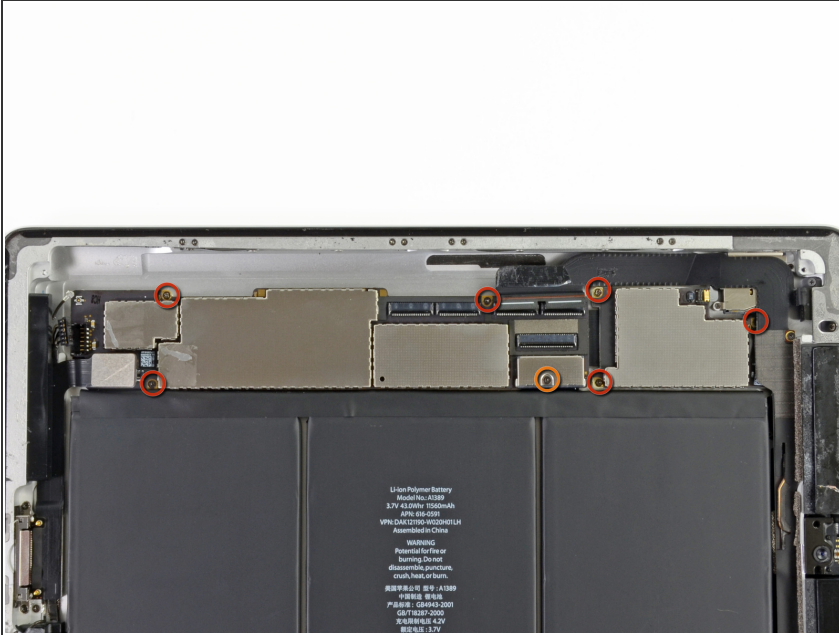
Step 46 — Logic Board Connectors



- Disconnect the following connectors from their respective sockets on the logic board:
 - Wi-Fi antenna cable
 - Speaker connector cable.
 - Dock/Lightning connector cable.
- ⓘ There may be a piece of black tape covering this connector. Remove it with tweezers.

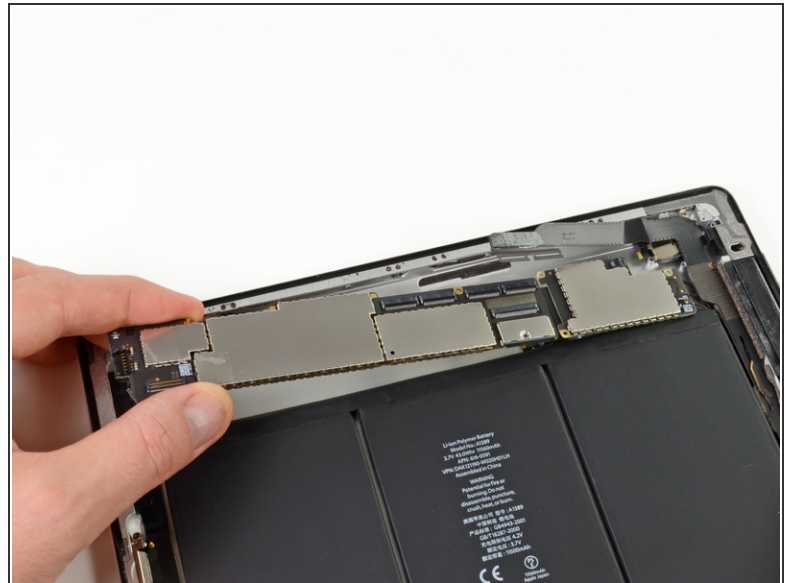
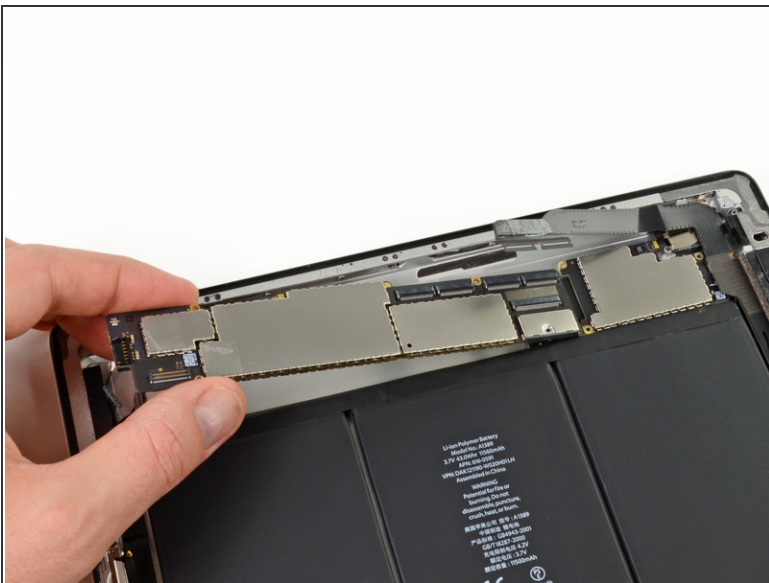
⚠ Make sure to pry underneath the connector and not the socket itself. Prying on the socket itself may cause severe damage.

Step 47 — Logic Board



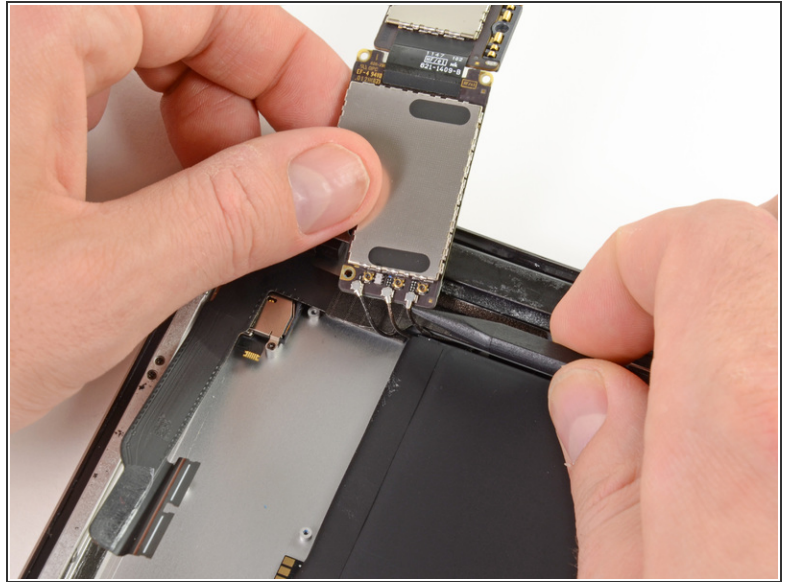
- Remove the following seven screws securing the logic board to the rear aluminum panel.
 - Six 2.1mm Phillips #00
 - ⓘ One of these screws, at the top of the logic board, is tucked beneath the headphone jack assembly cable. Take care to hold the cable out of the way while removing and replacing this screw.
 - One 2.5mm Phillips #00

Step 48



- Holding the logic board by the side nearest the dock connector, carefully pull the logic board toward the bottom of the iPad.

Step 49



- Flip the logic board over, minding any cables that may get caught.
- Using the tip of a spudger, remove the three antenna connectors from their sockets on the logic board.

Step 50 — Battery




- The battery is very firmly glued to the aluminum frame using copious amounts of strong adhesive.
- ⓘ In the following steps, you will be removing the adhesive from underneath the battery 2 inches at a time. This will prevent too much stress being put on the battery.
- ⚠ Be very careful to not puncture or damage the battery as you remove it from the iPad. Batteries contain toxic chemicals that can be harmful if ingested or inhaled.

Step 51



- Insert the flat end of a metal spudger underneath the battery near the bottom of the iPad.
- Slide the metal spudger approximately 1.5" underneath the battery, releasing the adhesive.

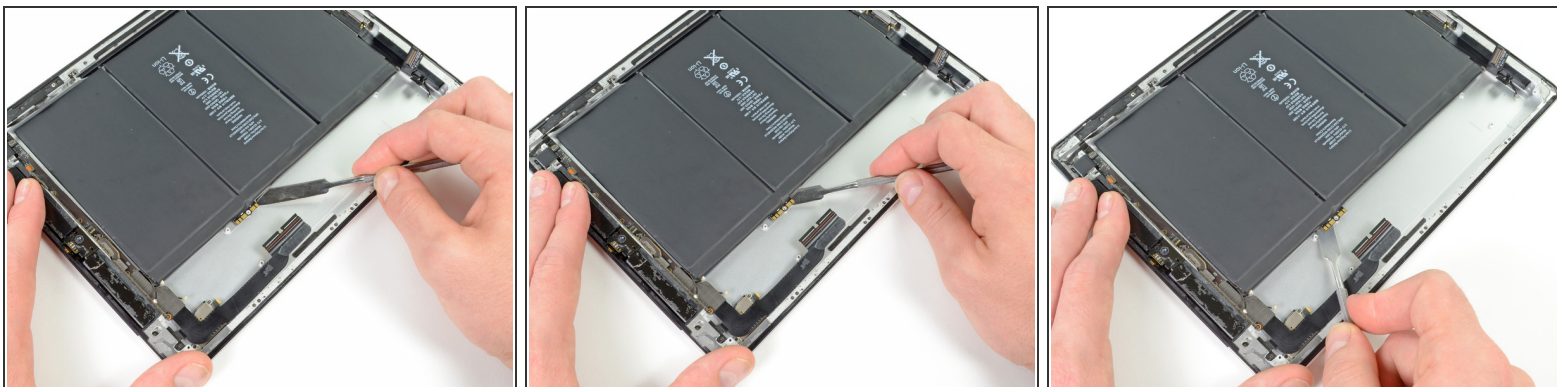
 The adhesive is very strong. Loosening the adhesive requires considerable force. Work slowly and carefully, making sure that the metal spudger does not slip.

Step 52



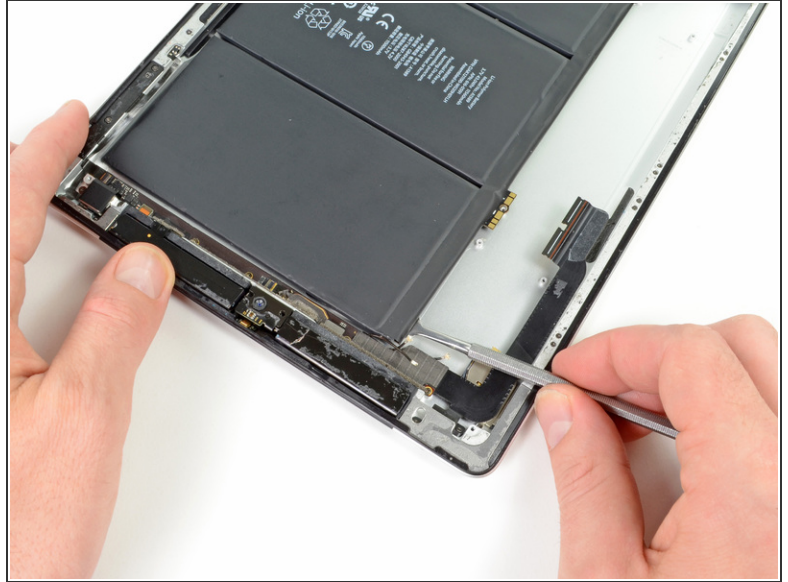
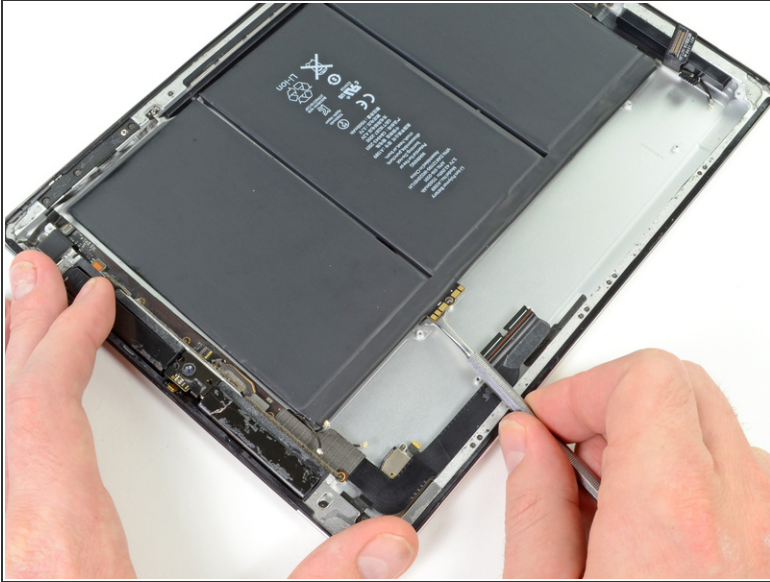
- In the same manner as described above, slide the spudger ~2" underneath the other adhesive strips.

Step 53



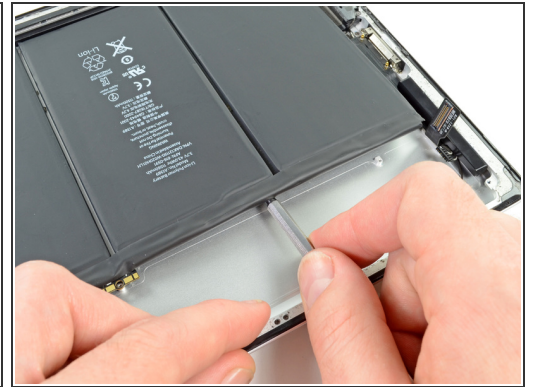
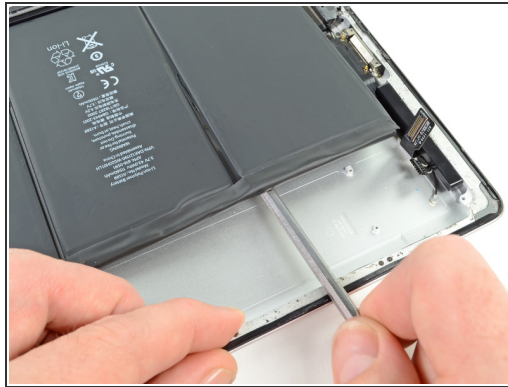
- Carefully slide the metal spudger underneath the battery connector, releasing the adhesive securing it in place.

Step 54



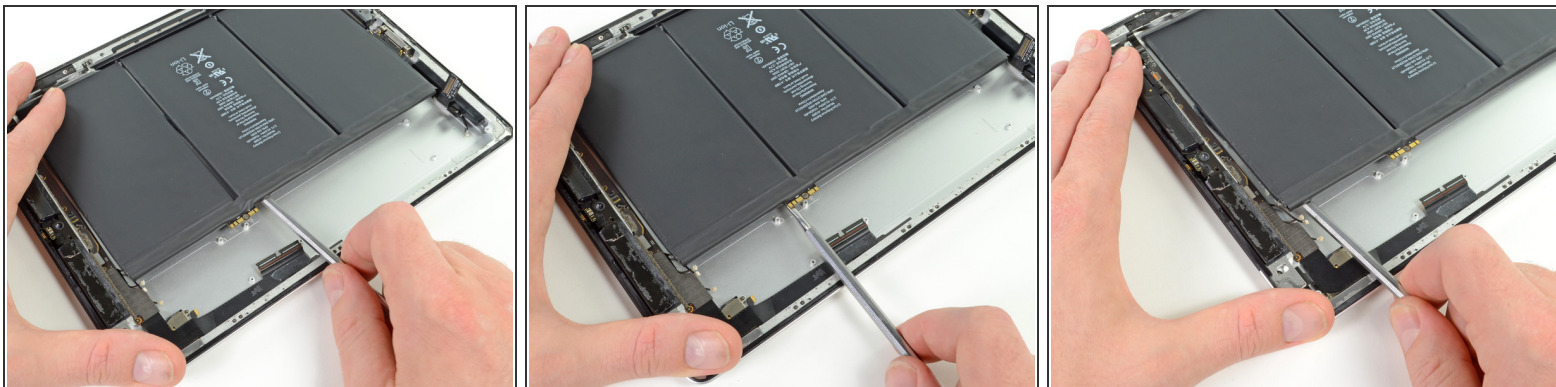
- Continue releasing the adhesive near the top of the battery.

Step 55



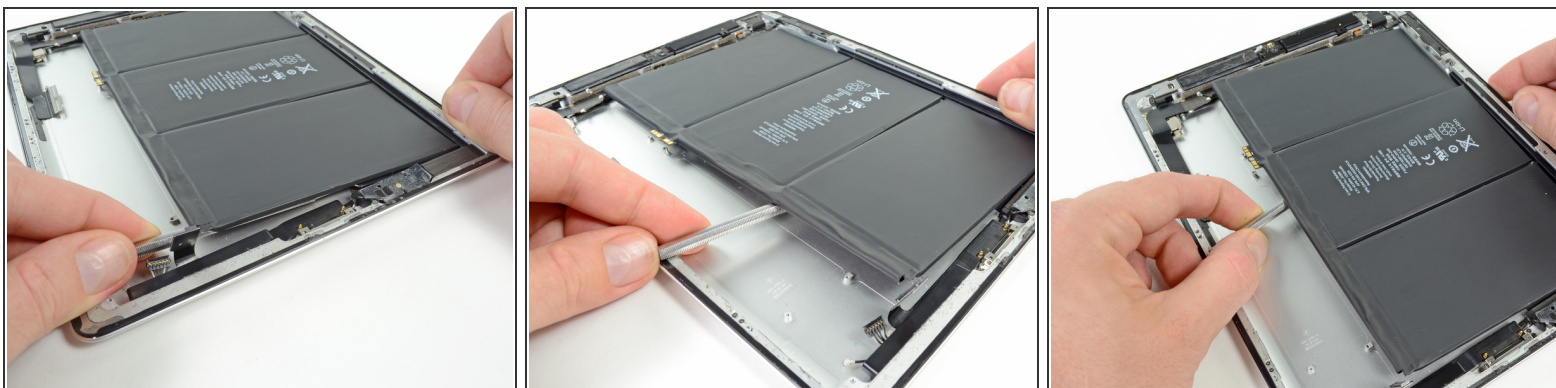
- Starting where the last pass left off, insert the metal spudger another two inches underneath the battery.
- ⚠ As you push the spudger further underneath the battery, keep it as flat against the rear case as possible to avoid bending the battery.
- Repeat this process for the remaining adhesive strips.

Step 56



- In the same manner as previously described, continue loosening the adhesive on all the strips to a depth of ~4".

Step 57



- For the last pass, push the metal spudger all the way to the right edge of the iPad.
- Continue to do this for all of the adhesive strips.

Step 58



- Make sure that all the adhesive glue has been loosed from the battery.
- Gently lift the left side of the battery up, rotating it toward the right side of the iPad.
 - ⓘ Use the metal spudger to loosen any adhesive that may still be holding the battery in place
- Remove the battery from the iPad.

To reassemble your device, follow these directions in reverse and use our [iPad 4 GSM Front Panel Adhesive strips](#) guide to reattach the front panel.